

ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

SPK-09682.1
Jun 84
Revised Apr 89

TO: Architect-Engineers and District Personnel:

1. The attached revised guide specification supercedes the previous guide, CARPET, SPK-9A (Air Force), dated June 1984, and is for use in the preparation of project specifications.

GENERAL NOTES

Para 2

TEXT REVISIONS

Para 1

Para 1.1

Para 1.2

Para 10

NOTE: A-E's should read all the TECHNICAL NOTES located at the beginning of this guide specification and edit the specification accordingly.

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GENERAL NOTES

1. This guide specification is to be used in the preparation of contract specifications in accordance with the Sacramento District Specification Manual. It will not be made a part of a contract merely by reference; pertinent portions will be copied verbatim into the contract documents.
2. Where numbers, symbols, words, phrases, clauses, or sentences in this specification are enclosed in the following manner: [], a choice or modification must be made; delete inapplicable portion(s) carefully. Where blank spaces occur in sentences, insert the appropriate data. Where entire paragraphs are not applicable, they should be deleted completely.

TECHNICAL NOTES

- A. The section number will be inserted in the specification heading and prefixed to each page number in project specifications.
- B. Paragraph 1: The listed designations for publications are those that were in effect when this guide specification was being prepared. These designations are updated when necessary by District Instruction, and references in project specifications need be no later than in the current District Instruction for this guide specification. To minimize the possibility of error, the letter suffixes, amendments, and dates indicating specific issues should be retained in Paragraph 1 and omitted elsewhere in the project specification.
- C. Paragraph 5.1: Color and pattern must be indicated on the drawings. When manufacturer's names, colors, and patterns are shown, add the following note: "Colors and patterns indicated are for identification purposes only; the listing is not intended to limit selection of similar colors and patterns from other manufacturers." Manufacturer's published data will be checked to insure that colors and patterns selected are available.

I. MAC Facilities:

Selection: Carpet must be chosen based on functional suitability, aesthetic appeal, and to enhance the work/living area. Colors must be

carefully selected to develop an overall coordinated color scheme including the walls, furnishings, and the carpet.

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a. Bold pattern carpet is the norm in all MAC facilities except chapels. The size of the pattern selected must be in harmony with the area to be carpeted. A pattern design is "one that contains any decorative, ornamental, or artistic feature. This feature may be free flowing and artistic, or geometric forms and shapes". Variations of shade of the same color (tone-on-tone) or very subtle color combinations do not satisfy MAC criteria.

(1). Bold pattern carpet is the only acceptable design in areas greater than 500 SF. For MAC, bold patterns are those that have at least three distinct colors combined with a pattern repeat greater than 4 inches. Light colored carpets, especially those with a dominance of white, or offwhite, or gold, required extensive maintenance and are prohibited.

(2). Bold tweed design may be used in areas of less than 500 SF and in all religious facilities. An enclosed area may be considered as a single room for computing SF requirements. A bold tweed for use in MAC facilities is defined as one that contains at least two distinct contrasting colors. Subtle variation of shade of the same color does not meet this definition. While aesthetics and liveability enhancement are major factors in carpet selection, maintainability (dirt-hiding power) and service life is the primary concern. Most tweed carpets do not have the equivalent soil hiding capabilities of bold-patterned carpet. Therefore, only those bold tweed designs which will hide stain or worn areas will be considered. Those very fine tweed patterns and subtle color combinations which will have the same soil-showing characteristics of solid colors are prohibited.

(3). Solid colors are prohibited.

b. If a carpet sample being considered for use in a facility is questionable as to meeting this criteria, submit to HQ MAC/DEE for evaluation.

c. Carpet shall be level or textured loop.

II. TAC Facilities:

Selection: Aesthetic considerations in selecting carpeting should

include selecting colors in keeping with general color standard in TAC. Extremely bright colors should be avoided. More subdued tones are preferred. In lieu of bright green, "electric" blue, or bright orange, a deep green, "steel" blue, or rust color is preferable.

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- a. Regarding the use of patterned carpet or carpet with "geometric" designs in corridors. Most patterned carpeting has a "geometric" design. Not all geometric patterns are unsuitable in corridors or other areas of long dimension. The ones to be avoided are those patterns where predominant lines run parallel with longest walls. The intent here is to avoid the appearance of the carpet running askew.
- b. Pattern: Regardless of area size, only patterned carpet will be used in all facilities except religious facilities and designated DV quarters.
 - (1). Chapels and religious facilities will use bold tweed carpet only, regardless of area size.
 - (2). TAC policy does not authorize bold tweed carpet anywhere except religious facilities, regardless of area size.
- c. Carpet shall be level loop pile or cut plush pile.
- d. Cushion back carpet is not authorized.
- D. Paragraph 5.1.5: Loop pile constructions are normally rated at 3,500 volts. Installations for critical areas such as computer rooms will use the 2,000 volts requirements.
- E. Paragraph 5.3: Specify aluminum or vinyl moldings as required. If both are acceptable, permit the Contractor to select the material.
- F. Paragraph 6: Other sections of specifications covering substrates will be checked to verify satisfactory conditions (tolerance, compatibility with adhesives, etc.) for application of carpet.
- G. For TAC Facilities use options in brackets when secondary backing is required.
- H. For TAC Facilities use option in bracket when separate cushion is used.
- I. For MAC Facilities use options in brackets when secondary backing is required. EXCEPTION: Medical facilities must use carpet with synthetic backings. Contact Project Manager for further criteria for medical

facilities.

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J. Paragraph 5.1.6:

Carpet for all area except corridor shall conform to DAC FF1-70 (PILL TEST). Carpet systems (carpet and pad) for corridors must be tested in accordance with UL 992 or Federal Test Method Standard 373 (Radiant Panel). Carpet systems tested in accordance with UL 992 must have a flame propagation index of less than 4.0. Carpet systems tested in accordance with Federal Test Method Standard 372 must meet the following criteria.

- a. Minimum average critical radiant flux of 0.50 watts per square centimeter for corridors in bachelor enlisted quarters, bachelor officer quarters, hospitals, and temporary lodging facilities.
- b. Minimum average critical radiant flux of 0.25 watts per square centimeter for corridor carpet in all other facilities.
- c. Carpet systems (carpet and pad) test is required only when installed in corridors, sleeping rooms, stairs and fire exits. All other areas may use carpet and padding where they have conformed to DOC-FF1-70 separately or as a carpet system.

K. Paragraph 5.1.1: Carpet yarn must be 100 percent nylon or a blend of 80 percent wool and 20 percent nylon or a blend of acrylic/nylon.

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SECTION 09682.1

CARPET

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SECTION 09682.1

CARPET

PART 1 - GENERAL

1. APPLICABLE PUBLICATIONS: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

1.1 American Association of Textile Chemists and Colorists (AATCC)
Publication:

Test Method 134-1986 Electrostatic Propensity of Carpet.

1.2 American Society for Testing and Materials (ASTM) Publications:

D 418-82 Pile Yarn Floor Covering Construction.

D 1335-67 Tuft Bind of Pile Floor Coverings.
(R 1972)

E 648-86 Critical Radiant Flux of Floor-Covering
Systems Using a Radiant Heat Energy Source.

1.3 Underwriters Laboratories Inc. (UL) Publications:

UL 992 Standard Method of Test for
Flame-Propagation Classification of Flooring
and Floor-Covering Materials (February 1971).

2. SUBMITTALS: Prior to installation of any carpet, the following shall be submitted for approval.

2.1 Manufacturer's Installation Instructions: Three copies of the manufacturer's printed installation instructions for the carpet, including complete procedures for an expert installation and covering preparation of substrate, seaming techniques, and recommended adhesives and tapes.

2.2 Maintenance Instructions: Three copies of the carpet manufacturer's maintenance instructions describing recommended type of cleaning equipment and material, spotting and cleaning methods and cleaning cycles.

2.3 Samples: Two 12-inch by 18-inch minimum size samples of each carpet

proposed for use, in the pattern and color indicated.

2.4 Certificates of Compliance: Certificates of compliance attesting that the materials meet the requirements specified shall be furnished in accordance with the SPECIAL CLAUSES.

3. DELIVERY AND STORAGE: Materials shall be delivered to the site in the manufacturer's original wrappings and packages clearly labeled with the manufacturer's name, brand name, size, and related information. Materials shall be stored in a clean, dry, well ventilated are, protected from damage and soiling, and maintained at a temperature above 60 degrees F. for two days prior to installation.

4. ENVIRONMENTAL REQUIREMENTS: Areas in which carpeting is to be installed shall be maintained at a temperature above 60 degrees F. for two days before installation, during installation and for two days after installation. A minimum temperature of 55 degrees F. shall be maintained thereafter for the duration of the contract. Traffic or movement of furniture or equipment in carpeted area shall not be permitted for 24 hours after installation. Other work which would damage the carpet shall be completed prior to installation of carpet.

PART 2 - PRODUCTS

5. MATERIALS:

5.1 Carpet: Carpet shall be [level or textured loop,] [level loop or cut plush pile] furnished in minimum 12-foot width except narrower widths may be furnished for hallways and corridors, and shall be the pattern and color indicated. Carpet shall be tufted, free of visual blemishes, streaks, poorly dyed areas, and other physical and manufacturing defects. Carpet materials and treatments shall be notoxic when used as ordinarily intended.

5.1.1 Pile yarn fibers shall be minimum 2-ply, carpet-type nylon which has never been reclaimed from any woven, tufted, knitted, or felted products. There shall be no undrawn fiber in spun yarn. Yarn shall be not less than third generation, continuous high bulk or textured fiber with average filament size of 15 denier or coarser modified to provide increased translucence or capacity for soil hiding, and shall have a built-in anti-static element.

5.1.2 Pile weight shall be nominal 26 ounces per square yard subject to normal manufacturing and measurement variances, and shall include that portion of the pile which extends into the backing structure. Weight shall be determined in accordance with ASTM D 418.

5.1.3 Pile density shall be nominal 4750 ounces per cubic yard subject to normal manufacturing and measurement variances when determined by the formula:

$$\text{Density} = \frac{\text{Pile weight} \times 36}{\text{Pile Thickness}}$$

Pile thickness shall be determined by a Shiefer Compressometer in accordance with ASTM D 418.

5.1.4 Backing materials shall be those customarily used and accepted by the trade for each type of carpet. Carpet shall have a secondary backing except when a special unitary back designed for direct gluedown is provided.

[5.1.4 Primary carpet backing shall be jute or 100 percent polypropylene. Polypropylene primary backings may be woven, such as polybac or approved equal, or non-woven, such as Typar or approved equal.]

[5.1.4.1 Secondary carpet backing shall be jute or 100 percent polypropylene. Polypropylene secondary backings shall be woven only, such as Action-Bac or approved equal.]

[5.1.4.1 Secondary carpet backing shall be jute, synthetic jute, or heavy vinyl.]

5.1.5 Static control shall be provided to permanently control static buildup to less than [3500] [2000] volts when tested at 20% relative humidity and 70 degrees F. in accordance with AATCC Test Method 134.

5.1.6 Flammability: Flame propagation index shall be less than 4.0 when tested in accordance with UL 992, or the minimum average critical radiant flux shall be [0.25] [0.05] watt per square centimeter when tested in accordance with ASTM E 648.

5.1.7 Tuft bind shall be a minimum 10-pound average force when tested in accordance with ASTM D 1335.

5.2 Adhesives [and Concrete Primer]: Adhesive [and concrete primer] for installation of carpet shall be waterproof, nonflammable, and as recommended by the carpet manufacturer. Seam adhesive shall be waterproof, nonflammable, and nonstaining as recommended by the carpet manufacturer.

5.3 Molding: [Molding shall be either aluminum or vinyl.] [Aluminum molding shall be hammered surface, pinless clamp-down type, designed for the type of carpet being installed.] Finish shall be [natural color anodized] [prefinished, color]. Floor flange shall be a minimum 1-1/2 inches wide and face shall be a minimum 5/8-inch wide. [Vinyl molding shall be heavy-duty and designed for the type of carpet being installed. Floor flange shall be a minimum 2 inches wide. Color shall be .]

5.4 Tape: Tape for seams shall be as recommended by the carpet manufacturer for the type of seam used in installation.

[5.5 Separate Carpet Cushion: Cushion shall be rubber waffle cushion, a

minimum of 48 oz. total weight of 100 percent polyurethane cushion, a minimum of 3/8" thick.]

PART 3 - EXECUTION

6. SURFACE CONDITIONS: Carpet shall not be installed on surfaces that are unsuitable and will prevent a proper installation. Floor shall be free of any foreign materials and swept broom clean.

7. MOISTURE TEST: After concrete floor surface have been cleaned, small patches of adhesive to be used shall be spread in several locations in each area and allowed to dry overnight. If the adhesive can be peeled easily from the floor surfaces, the floor is not sufficiently dry. The test shall be repeated until the adhesive adheres properly. When the adhesive adheres tightly to the floor surface, the carpet shall be applied. When concrete floor are in contact with the ground or over unventilated crawl spaces, small patches of primer shall be used in lieu of adhesive to test for moisture.

8. INSTALLATION: Installation shall be in accordance with the manufacturer's instructions.

8.1 Carpet: Carpet shall be installed [by direct glue down without cushion] [with a separate cushion] and shall be smooth, uniform, and secure, with a minimum of seams. Side seams shall be run toward the light where practical and where such layout does not increase the number of seams. Breadths shall be installed parallel, with carpet pile in the same direction. [Patterns shall be accurately matched.] Cutouts, as at door jambs, columns and ducts shall be neatly cut and fitted securely. Seams at doorways shall be located parallel to and centered directly under doors. Seams shall not be made perpendicular to doors or at pivot points. Seams at changes in directions of corridors shall follow the wall line parallel to the carpet direction.

8.2 Seams: Seams shall be uniform, unnoticeable, and treated with seam adhesive.

8.3 Molding: Edges of carpet meeting hard surface flooring shall be protected with molding. Installation shall be in accordance with the molding manufacturer's instructions.

9. CLEANING AND PROTECTION:

9.1 Cleaning: After installation of the carpet, debris, scraps, and other foreign matter shall be removed. Soiled spots and adhesive shall be removed from the face of the carpet with appropriate spot remover. Protruding face yarn shall be cut off and removed. Carpet shall be vacuumed clean. Carpet shall not be shampooed within 7 days of installation.

9.2 Protection: The installed carpet shall be protected from soiling and damage with heavy, reinforced, nonstaining kraft paper or polyethylene film until removal of protective material is directed. Edges of protection shall be lapped and secured to provide a continuous cover.

10. CONSTRUCTION QUALITY CONTROL: Attention is directed to SECTION: CONSTRUCTION QUALITY CONTROL which requires the Contractor to perform quality control inspection, testing, and reporting.

* * * * *

- REMINDER -

Located at the front of these specifications are the Contract Clauses, Special Clauses and Division I GENERAL REQUIREMENTS of the Technical Specifications, which apply to every aspect of this contract including the work in this section whether performed by Prime Contractor, subcontractor, or supplier.